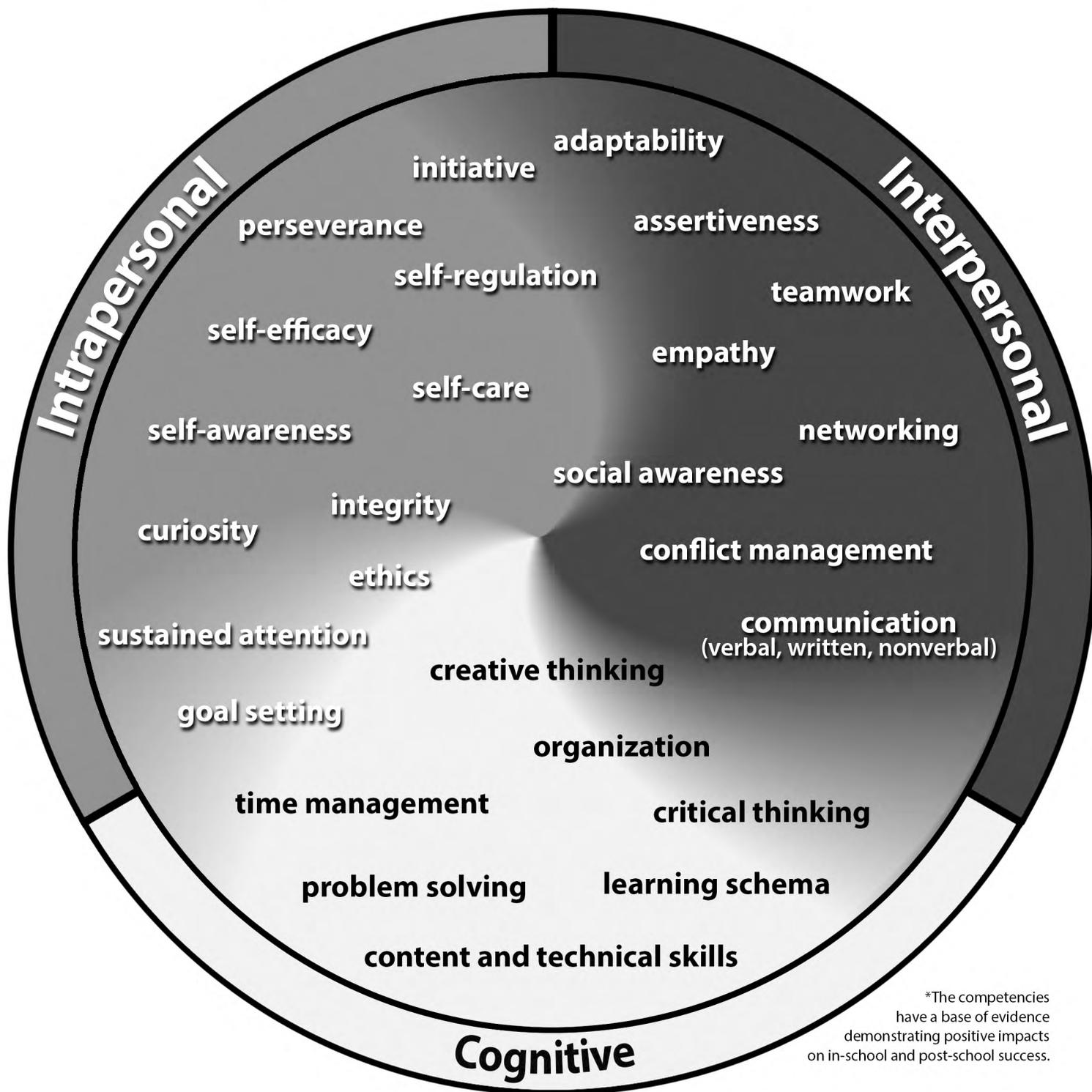


College and Career Competency Wheel



Gaumer Erickson, A.S., Noonan, P., & Soukup, J.H. (2016). College & Career Competency Wheel (3rd ed.). Lawrence, KS: University of Kansas, Center for Research on Learning. Derived in part from Pellegrino, J.W., & Hilton, M.L. (Eds.). (2012). *Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century*. Washington, DC: National Academies Press.

For more information, visit:
<http://ResearchCollaboration.org/page/CCCFramework>



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Research has identified teachable, transferable skills that **positively impact** behavior, academic achievement, graduation rates, and post-school outcomes (National Academy of Sciences, 2012).

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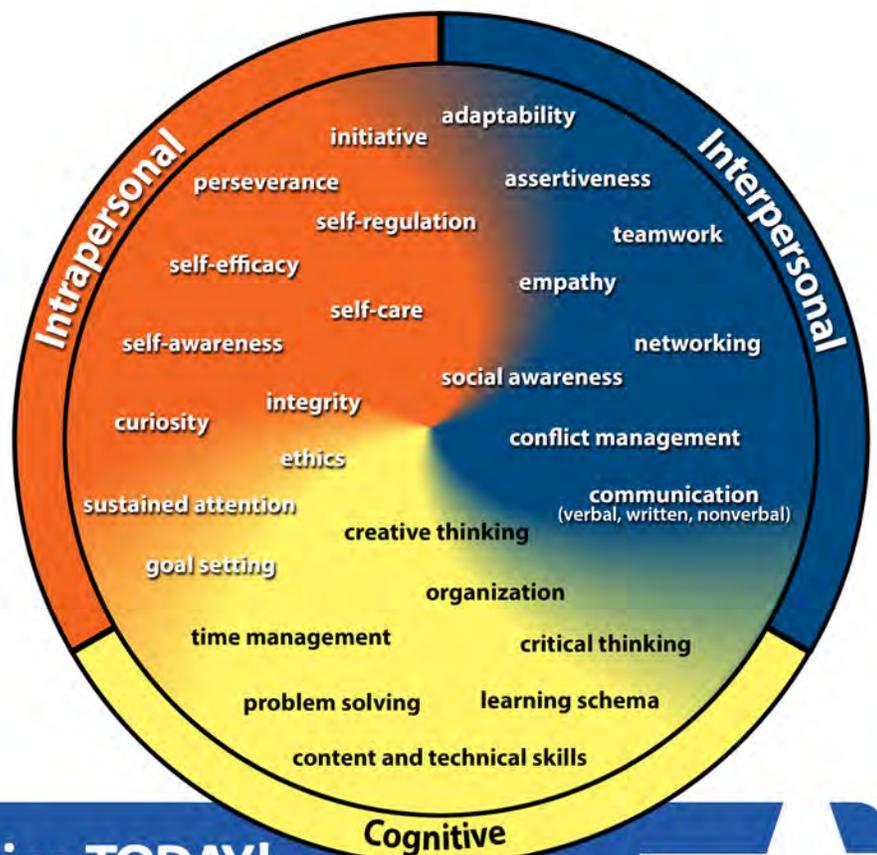
- **Self-Efficacy** • **Self-Regulation**
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- **Conflict Management** • **Empathy**

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Self-Efficacy



1

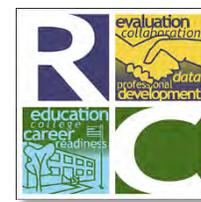
Ability
can grow
with effort!



2

Believe
in your ability!





Teacher Guide

College and Career Competency: *Self-Efficacy*

Definition:

Self-efficacy refers to perceptions an individual has about his/her capabilities to perform at an expected level and achieve goals or milestones. It is shown to influence academic **motivation**, learning, and achievement (Pajares, 1996; Schunk & Pajares, 2001).

Essential Components for Students:

1. Self-efficacy increases with the belief that ability can grow with effort.
2. Believe in your ability to meet specific goals and/or expectations.

Research:

- Students with higher levels of self-efficacy will engage more, work harder, and persist longer when they encounter difficulties (Zimmerman, 2000).
- Academic self-efficacy, which is related to academic mindsets, is a student's confidence in his/her ability to successfully execute an academic task. Low academic self-efficacy can lead a student to give up early on a difficult task. Conversely, high academic self-efficacy can lead a student to willingly take on and persist with difficult tasks (Mercer, Nellis, Martinez, & Kirk, 2011; Schunk, 1985; Schunk & Pajares, 2001).
- Research shows that self-efficacy can predict academic achievement, use of appropriate social skills, rigorous course selection, challenging career choices, and exceptional athletic performance across age levels (Britner & Pajares, 2006; Schunk, 1991).
- Success in performing tasks increases self-efficacy, and failure lowers it; however, once strong self-efficacy is established, failure does not provide a setback (Schunk, 1991).
 - A student's initial self-efficacy, for example, when starting a new assignment, will be driven by the student's self-perceived ability, aptitude, and prior experiences. Progress toward goals signals to the student that he/she is becoming more skilled. This, combined with factors like teacher feedback, will impact performance, which in turn will increase self-efficacy, which enhances **motivation**, leading to a cycle of positive validation that supports continuous skill development (Schunk, 1991).
- Students develop self-efficacy based on inputs from four sources: 1) previous performance, 2) observing others performing tasks, 3) verbal and nonverbal judgments and feedback, and 4) their emotional state (e.g., anxious, nervous) (Britner & Pajares, 2006; Schunk & Pajares, 2001). Students will interpret and integrate inputs from these sources to form a belief about their capabilities.
- Similar to self-efficacy, Farrington et al. (2012) define academic mindsets as "beliefs, attitudes, or ways of perceiving oneself in relation to learning and intellectual work that support academic performance" (p. 28). Academic mindsets can be positive as well as negative. Positive academic mindsets can lead to improved academic performance by helping students **persevere** when



tackling challenging problems and remain engaged in learning. As performance improves, positive mindsets are reinforced, leading to a positive mindset-building cycle. In contrast, negative mindsets can lead to a self-repeating cycle of poor academic performance. Academic mindsets are reflected in statements like:

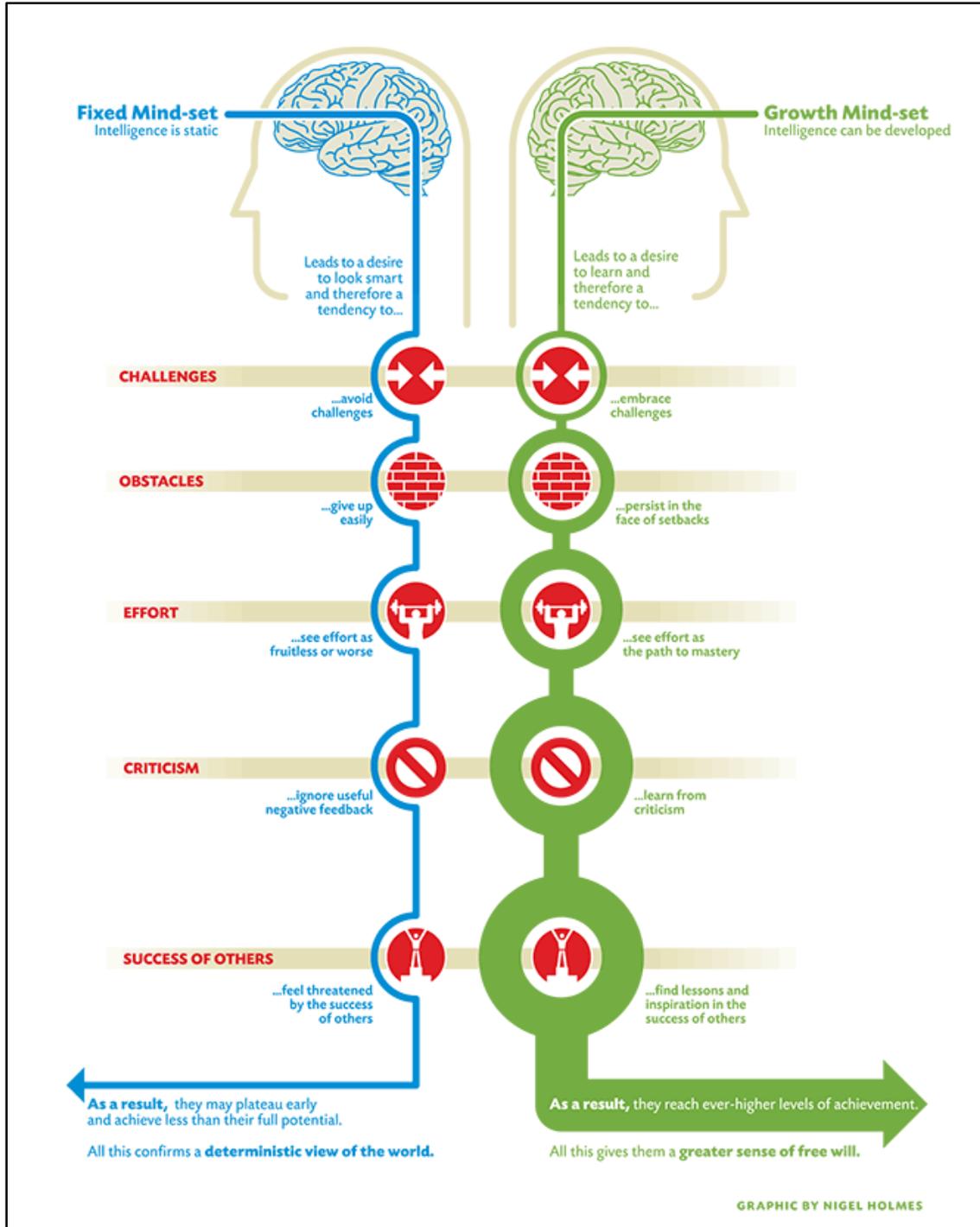
- I belong in this classroom/school.
 - My ability and competence grows with effort.
 - I can succeed at this task/assignment/challenge.
 - This work has value for me.
- The academic and learning outcomes that can be impacted by positive academic mindsets include increased use of applied **knowledge**; progress through school; and improved achievement, as measured by grades and test scores (Snipes, Fancsali, & Stoker, 2012).
 - A study of students in the 5th, 8th, and 11th grades showed that their perceptions of academic self-efficacy increased during junior high, despite declining self-perceptions of academic competence. Researchers explain this seeming contradiction by noting that perceptions of academic competence are based on comparisons to peers, whereas self-efficacy is an internal belief in capability. Therefore, they suggest that teachers use instructional practices that minimize social comparisons (Zimmerman & Martinez-Pons, 1990).
 - According to Britner & Pajares (2006), self-efficacy in science is associated with both achievement in science and science-related choices that students make across grade levels. “In science, students who have a strong belief that they can succeed in science tasks and activities will be more likely to select such tasks and activities, work hard to complete them successfully, **persevere** in the face of difficulties, and be guided by psychological indexes that promote confidence as they meet obstacles” (p. 486). If students work on a challenging task and experience success, they experience increased self-efficacy. Teachers can support self-efficacy by conveying to students that they are acquiring science skills and **knowledge** (Schunk, 1985).
 - Certain teaching practices can also lower students’ self-efficacy. Results from a three-year study of students in grades 2-4 suggest that certain classroom instructional practices, such as grouping students by ability, rewarding correct answers versus effort, and having high expectations of some children and low expectations of others, can impact how capable a child believes him- or herself to be, lowering self-efficacy (Hughes & Chen, 2011).
 - In research involving students of various mathematical abilities, it was shown that after controlling for ability, students who had higher self-efficacy solved more problems correctly (Schunk, 1985). The researchers also found that specific goals help develop self-efficacy because the student can gauge progress (Schunk, 1984).
 - “Learning environments that construe ability as an acquirable skill, deemphasize competitive social comparison, and highlight self-comparison of progress and personal accomplishments are well suited for building a sense of efficacy that promotes academic achievement” (Bandura, 1993, p. 125).
 - Individualized learning environments in which instruction is customized to students’ academic abilities and in which cooperation is emphasized over competition are more likely to increase academic self-efficacy (Pajares, 2006, p. 339). Emphasizing effort, rather than intelligence, encourages students to see ability as something that can be changed, and that accomplishment is the result of hard work.
 - As the diagram below shows, belief that intelligence can be developed leads to a desire to learn and a tendency to embrace challenge, persist in the face of setbacks, see effort as a path to mastery, learn from criticism, and find lessons and inspiration in the success of others. This



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results in ever-higher levels of achievement (Tomsett, 2013). Additional information is available at <http://johntomsett.com/2013/10/20/this-much-i-know-about-developing-a-dweck-inspired-growth-mindset-culture/>.



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Assessments:

- The Self-Efficacy Questionnaire for Children (SEQ-C) is a reliable instrument designed for students in grades 8 to 12 (Muris, 2001). The 24 items are self-rated from 1 (not at all) to 5 (very well) to create composite scores in the domains of academic self-efficacy, social self-efficacy, and emotional self-efficacy. The assessment is available at http://drjenna.net/wp-content/uploads/2013/07/self-efficacy_questionnaire.pdf. Sample questions for each domain of self-efficacy are listed below.
 - How well can you study when there are other interesting things to do? (academic)
 - How well can you express your opinions when other classmates disagree with you? (social)
 - How well do you succeed in cheering yourself up when an unpleasant event has happened? (emotional)
- The Children's Self-Efficacy Scale (Bandura, 2006) is designed for youth aged 10 to 15 and includes 22 items within three domains: self-efficacy in enlisting social resources, self-efficacy for academic achievement, and self-efficacy for **self-regulated** learning. Youth identify their level of confidence by writing a number between 0 (cannot do at all) and 100 (highly certain can do). The scale is available at www.strivetgether.org/sites/default/files/images/9%20Childrens%20Self-Efficacy%20Scale.pdf. Examples of questions in each domain are listed below.
 - Get a friend to help me when I have social problems (enlisting social resources)
 - Learn general mathematics (academic achievement)
 - Get myself to study when there are other interesting things to do (**self-regulated** learning)
- The Academic Efficacy subscale from Patterns of Adaptive Learning Scales (PALS) is a reliable measure of self-efficacy in a specific class (Midgley et al., 2000). It was designed for grades 3 through 9 and includes five questions rated on a Likert scale ranging from 1 (not at all true) to 5 (very true). The scale is available at www.strivetgether.org/sites/default/files/images/3%20PALS_Student%20Academic%20Efficacy%20subscale%20from%20Patterns%20of%20Adaptive%20Learning%20Scales.pdf. The items are:
 1. I'm certain I can master the skills taught in class this year.
 2. I'm certain I can figure out how to do the most difficult class work.
 3. I can do almost all the work in class if I don't give up.
 4. Even if the work is hard, I can learn it.
 5. I can do even the hardest work in this class if I try.
- The Student Self-Report of Academic Self-Efficacy (Hoover-Dempsey & Sandler, 2005) is a three-item measure with items rated from 1 (not true) to 4 (very true) available at <http://www.strivetgether.org/sites/default/files/images/7%20Student%20Self-Report%20of%20Academic%20Self-Efficacy.pdf>. It was designed for students in grades 4 to 6. The items are:
 1. I can do even the hardest homework if I try.
 2. I can learn the things taught in school.
 3. I can figure out difficult homework.
- The College-Going Self-Efficacy Scale (Gibbons, 2005) is a reliable measure that was designed for middle school students regarding their perceived intent to attend and persist in college, available at www.strivetgether.org/sites/default/files/images/16%20College%20Going%20Self-



[Efficacy%20Scale.pdf](#). The 30 items are rated on a 4-point scale from ‘not at all sure’ to ‘very sure.’

Attendance items include:

1. I can find a way to pay for college.
2. I can choose a good college.
3. I can choose the high school classes needed to get into a good college.

Items indicating intent to persist in college include:

1. I could get A’s and B’s in college.
2. I could fit in at college.
3. I would like being in college.

Instructional Strategies:

- The most successful interventions (in terms of statistically significant impact on academic outcomes) are those that emphasize that intelligence grows with effort (Snipes et al., 2012; Dweck, Walton, & Cohen, 2014). For example, offering students information on the physiology of the brain and emphasizing how the brain is like a muscle that grows more connections (i.e., gets stronger) when the individual works on a challenging task will reinforce the message that extra effort can produce successful outcomes. The Mindset Works intervention can be provided for a cost, online as well as through a workshop (see <http://www.mindsetworks.com/>).
 - Teachers can encourage this growth mindset by praising effort rather than ability.
 - Classroom strategies that encourage competition among peers can reinforce a fixed mindset about intelligence and performance (rather than emphasizing mastery **goals**), and thus lead to lower achievement by some students.
- Instructional strategies that lead to higher levels of self-efficacy include (Schunk, 1985):
 - Modeling the application of certain cognitive skills, such as explaining out loud how you solved a mathematics problem. It builds self-efficacy to describe “good” mistakes that show learning by explaining the learning demonstrated. See an example at <https://www.teachingchannel.org/videos/class-warm-up-routine>.
 - Having a peer model how she or he coped with solving a difficult problem, again by verbalizing the steps followed and discussing the outcome.
 - Training students in understanding and applying learning strategies. For example, in a remedial listening comprehension program, teachers modeled comprehension strategies, then had the students practice by verbalizing a strategy before they applied it to a question. The self-verbalization worked as a form of rehearsal, building students’ belief in their ability to complete the task independently.
 - Offering explicit performance feedback so that students’ attention is intentionally focused on the skills and **knowledge** they are acquiring. For example, conveying where the student is making progress is especially important when students are learning complex skills where they quickly learn some components but not others. Specific feedback by the teacher can highlight the correct components and help the student address the problem areas. The teacher feedback can be provided verbally or with charts. The most important thing is that the feedback be clear and timely.
- **Goal setting** is important to self-efficacy (Schunk, 1990; Schunk & Pajares, 2001). Self-set goals also lead to higher self-efficacy. Have students set short-term, specific, and challenging but



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attainable learning goals; provide feedback on goal progress and effort (Schunk & Pajares, 2001).

- Interventions that promote positive academic mindsets can be relatively brief but still have long-term effects. This is because the interventions affect the self-repeating processes that cause results to accumulate over time (Yeager & Walton, 2011). An example of a brief but effective intervention is having struggling students meet with older students to discuss challenges with academic success that they encountered while transitioning to a new environment (e.g., middle school to high school), and how they overcame the challenges and improved their grades. This helps the struggling students understand that poor performance is normal in a transition, that poor grades do not reflect lack of ability, and that the grades can improve as the student adjusts to the new environment.
- Science teachers can apply several strategies to increase their students' science self-efficacy (Britner & Pajares, 2006):
 - Scaffold students' science development to ease the transition from textbook-based to laboratory-based science instruction.
 - Help students interpret their classroom experiences in a positive way.
 - Invite experts into the classroom to help model science skills and explain how failed experiments are an opportunity for new scientific insights.
 - Help students understand their emotions and work through anxiety.
- The *Responsive Classroom (RC)* is a social and emotional learning (SEL) intervention designed for elementary school students that was found to decrease students' anxiety and increase academic self-efficacy (Griggs, Rimm-Kaufman, Merritt, & Patton, 2013).
 - The RC approach consists of seven principles and 10 practices based on those principles. An example of a principle is, "The social curriculum is as important as the academic curriculum" (p. 362). This principle drives the practice of holding a morning meeting, which is a structured class meeting where students and teachers greet one another and share news.
 - "RC teachers are trained to understand and be sensitive to children's individual needs and to create well-organized classroom environments in which children feel safe taking academic risks" (p. 369).
- Other successful approaches to reinforcing positive academic mindsets include (Dweck et al., 2014):
 - Setting high standards that promote a growth mindset and learning goals:
 - Early intervention when difficulties arise (in school year, in transition) is important.
 - Teachers should avoid overpraising for mediocre work.
 - Standards must be perceived by the student as attainable.
 - For example, at the beginning of a school year, have students write down aspirational but specific **goals**, then help students break the goals down into concrete, short-term activities to accomplish the goals. This not only presents the student with a challenge, but also helps reinforce the importance of effort by providing a way to track progress.
 - Providing cognitive and motivational scaffolding:
 - Personalize high-quality feedback that includes encouragement to continue.
 - Support students to re-phrase self-criticism. Instead of saying, "I'm not good at this" say "I've learned this part, but I still need to work on this," (Dweck, 2006).



- Support student autonomy through cues that emphasize good performance as a result of the student’s effort. For example, using the word “might” versus “should” when presenting a new task can nurture autonomy by appearing less controlling to the student.
- Support intrinsic **motivation** by emphasizing relevance of the activity to personal growth. For example, discuss how the activity that the student is undertaking directly supports the goal of getting a job, going to college, or contributing to the community.
- Helping students feel connected and supported:
 - Provide one-on-one attention.
 - Express interest in the student’s social/family environment.
 - Establish small groups of peer learners who can work on problems as a community of learners. For example, intersperse questions during a lecture and then have students discuss the questions in a group until they arrive at the correct answer. By engaging with the students interactively, the teacher gains good feedback on their understanding of the material, and the students gain immediate feedback on their thought processes.

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Self-Efficacy Questionnaire

Please **CHECK ONE** response that best describes you. Be honest, since the information will be used to help you in school and also help you become more prepared for college and careers. There are no right or wrong answers!

Student ID _____

Date _____

	Not very like me → Very like me				
	1	2	3	4	5
1. I can learn what is being taught in class this year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I can figure out anything if I try hard enough.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. If I practiced every day, I could develop just about any skill.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Once I've decided to accomplish something that's important to me, I keep trying to accomplish it, even if it is harder than I thought.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am confident that I will achieve the goals that I set for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. When I'm struggling to accomplish something difficult, I focus on my progress instead of feeling discouraged.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I will succeed in whatever career path I choose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I will succeed in whatever college major I choose.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I believe hard work pays off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. My ability grows with effort.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I believe that the brain can be developed like a muscle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I think that no matter who you are, you can significantly change your level of talent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I can change my basic level of ability considerably.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Self-Regulation

MY PLAN

Step 1: _____

Step 2: _____

Step 3: _____

Step 4: _____

MY GOAL

1

Make a plan.

Is this working?

2

Monitor your plan.

MY PLAN

Step 1: _____

Step 2: _____

Step 3: ~~_____~~

Step 4: _____

MY GOAL

3

Take control
and **make changes**
to your plan (if needed).

Can I make this better?

4

Reflect on what worked.





Teacher Guide

College and Career Competency: *Self-Regulation*

Definition:

Self-regulation is considered a multidimensional construct (Abar & Loken, 2010), so it can be defined in different ways. In general, however, self-regulation refers to proactively applying self-directive processes, cognitive behaviors, and emotions to attain goals and skills (Abar & Loken, 2010; Zimmerman, 2008). Self-regulated students are “metacognitively, motivationally, and behaviorally active participants in their own learning process” (Zimmerman, 1986, as cited in Zimmerman, 2008, p. 167). Self-regulation of learning consists of **goal setting** and selecting learning strategies, then remaining motivated while charting progress against goals (Zimmerman, 2000, as cited in Ramdass & Zimmerman, 2011). Self-control and self-evaluation are strategies used for self-regulation (Cleary & Zimmerman, 2004).

Essential Components for Students:

1. Plan for and articulate what you want to accomplish.
2. Immediately monitor progress and interference regarding your goal.
3. Control change by implementing specific strategies when things are not going as planned.
4. Reflect on what worked and what you can do better next time.

Research:

- Self-regulation can predict academic achievement (Ursache, Blair, & Raver, 2012).
- Training students, including primary school children, in self-regulation has a positive effect on learning outcomes, strategy use, and **motivation** (Dignath, Buettner, & Langfeldt, 2008).
- Several studies have shown that teachers can successfully adapt activities and assignments to help students develop self-regulatory skills.
 - In a study involving 4th graders and math instruction in Germany, the students trained by the teacher in self-regulated learning showed significant increases in both homework effectiveness and math achievement (Zimmerman, 2008).
 - Meaningful homework (tasks assigned by a teacher and completed outside of school hours) has been found to foster self-regulation skills and is positively correlated to student achievement (Ramdass & Zimmerman, 2011).
- Self-regulated learning strategies include self-evaluation, **goal setting** and planning, keeping records (like a diary) and monitoring, student-initiated practice via rehearsing and memorizing, seeking peer assistance, seeking teacher assistance, and reviewing notes (Nota, Soresi, & Zimmerman, 2004).
- Frequency of students’ self-regulated strategy use predicted a substantial amount of variance in achievement scores (Nota et al., 2004).



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- **Self-efficacy** (belief and confidence in abilities) is positively correlated to self-regulated learning, as are task value beliefs (belief that the work or task is interesting and valuable) (Pintrich, 1999).
 - Accomplishing goals requires effective planning and goal-oriented behaviors during goal-striving (i.e., working toward the goal) (Boekaerts & Corno, 2005; Duckworth, Grant, Loew, Oettingen, & Gollwitzer, 2011). Research (Duckworth et al., 2011) conducted with 66 second-year high school students at an urban school showed that self-regulatory strategies for successful goal pursuit can be taught directly. These self-regulatory strategies consist of mental contrasting and implementation intentions, defined below.
 - Mental contrasting involves imagining a desired future (e.g., graduating high school, doing well on a test) and then reflecting on the present reality and any obstacles that might stand in the way (Oettingen & Gollwitzer, 2010).
 - Implementation intentions specify when, where, and how the goal will be pursued (Oettingen & Gollwitzer, 2010). They can take the form of “if-then” plans that highlight what step the student will take in different situations to stay on track during goal-striving. For example, in the study by Duckworth et al. (2011), students identified two positive outcomes of completing practice tests in a PSAT preparation workbook and two potential obstacles to completing the tests (mental contrasting). They then wrote potential solutions in the form of “if/then” statements to overcome the obstacles (implementation intentions). These students completed 60% more practice questions than students who did not use the mental contrasting/implementation intentions strategies.
- While self-regulation is often studied as an individual process, research increasingly encompasses its relation to social context elements (Meyer & Turner, 2002).
 - In a qualitative study, researchers found that scaffolded instruction during a classroom math lesson provided the knowledge, skills, and support for developing students’ self-regulation. (Meyer & Turner, 2002).
 - Instructional scaffolding supports student self-regulation by helping students increase understanding and thereby building their confidence; engaging students in learning while also supporting socio-emotional needs; and helping students build and apply autonomy (Meyer & Turner, 2002).

Assessments:

- Self-regulation assessment instruments developed in the 1990s tended to be domain- and situation-specific and based on self-reports. Newer assessment techniques fit specific contexts and capture a student’s use of self-regulation in action (Boekaerts & Corno, 2005).
 - The [Motivated Strategies for Learning Questionnaire](#) (MSLQ) is a 44-item self-report instrument that uses a Likert-type scale to measure the student’s cognitive and metacognitive strategies as well as their **motivation** and use of specific techniques (Pintrich, Smith, Garcia, & McKeachie, 1993).
 - [Think aloud protocols](#) can be used to have students verbalize thoughts, feelings, and strategies as they work through a problem. It is most useful for older students who have



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a sufficient vocabulary to describe the components of self-regulation (Boekaerts & Corno, 2005).

- o The [Self-Regulated Learning Interview Schedule](#) (SRLIS) asks students to describe their study methods in a semi-structured interview by responding to prompts and hypothetical situations presented by the interviewer (Zimmerman & Martinez-Pons, 1988).
- The [Arc's Self-Determination Scale](#) (Wehmeyer & Kelchner, 1995) is a 72-item self-report measure with 148 possible total points. Higher scores indicate higher self-determination. Subscale scores are also available for four characteristics that are important for self-determination: autonomy, self-regulation, psychological empowerment, and self-realization.
- The Homework Management Scale (Xu, 2008) is a 22-item questionnaire that measures homework strategies like finding a quiet place, handling distractions, and managing time. Students select a response from never, rarely, sometimes, often, or routinely. The 22 items are listed below. Note, items 18-22 are reverse-scored.
 1. Locate the materials I need for my homework
 2. Find a quiet area
 3. Remove things from the table
 4. Make enough space for me to work
 5. Turn off the TV
 6. Set priority and plan ahead
 7. Keep track of what remains to be done
 8. Remind myself of the available remaining time
 9. Tell myself to work more quickly when I lag behind
 10. Find ways to make homework more interesting
 11. Praise myself for good effort
 12. Praise myself for good work
 13. Reassure myself that I am able to do homework when I feel it is too hard
 14. Tell myself not to be bothered with previous mistakes
 15. Tell myself to pay attention to what needs to be done
 16. Tell myself to calm down
 17. Cheer myself up by telling myself that I can do it
 18. Daydream during a homework session
 19. Start conversations unrelated to what I'm doing
 20. Play around with other things while doing my homework
 21. Stop homework repeatedly to find something to eat or drink
 22. Stop homework to send or receive "instant messages"
- The [Self-Regulation Strategy Inventory](#) (Cleary, 2006) is a 28-item self-report questionnaire that uses a 7-point Likert-type scale from 1 (never) to 7 (always) to measure students' use of specific self-regulation strategies.



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Instructional Practices:

- Teachers can help students develop self-regulatory skills through homework assignments by using a checklist or log that asks students to note when they began and completed the assignment, how they kept themselves motivated and avoided distractions, and what their behaviors were during the homework assignment (Ramdass & Zimmerman, 2011). See these links for examples of logs and checklists.
 - [Homework Checklist for Parents](#) (John Greer Grade School, 2015).
 - [Homework Log](#) (WTTW, 2015).
 - [Daily Homework Log](#) (Palmer, 2015).
- Rubrics are self-assessment tools that have positive effects on self-assessment. When used in conjunction with scripts, they have been found to facilitate self-regulation and learning (Panadero, Tapia, & Huertas, 2012).
 - Rubrics consist of a list of criteria for assessing the important goals of a task; a grading scale for the different levels of achievement; and a description of those levels (Panadero et al., 2012).
 - Scripts are a second type of self-assessment tool. They consist of specific questions about how to approach a task from beginning to end, and are organized into steps. The questions are based on models of how an expert would complete the task (Panadero et al., 2012).
- One aspect of self-regulated learning is that the student can monitor whether learning has occurred. Researchers found that having students generate keywords when reading resulted in more accurate judgment of learning and comprehension for 6th and 7th graders. Their comprehension was both self-rated and assessed via a test (de Bruin, Thiede, Camp, & Redford, 2011).
- Curricular programs for preschoolers have been found to be effective in promoting self-regulation (Ursache et al., 2012).
 - [Head Start REDI](#) (Research-Based Developmentally Informed) program (Bierman et al., 2008, as cited in Ursache et al., 2012) uses coaching, scripted reading exercises, and social-emotional learning to improve language and literacy skills, social and emotional understanding, and engagement.
 - [PATHS](#) (Promoting Alternative Thinking Strategies) curriculum (Domitrovich, Cortes, & Greenberg, 2007; Riggs, Greenberg, Kusche, & Pentz, 2006, as cited in Ursache et al., 2012) provides the social-emotional part of the REDI curriculum. The PATHS curriculum promotes emotional and social competencies and reduces aggression and behavior problems in elementary school-aged children while enhancing the educational process in the classroom. It is designed to be used by educators and counselors in a multi-year, universal prevention model in the classroom setting with all elementary school-aged children.
 - [Chicago School Readiness Project \(CSRP\)](#) (Raver et al., 2009, as cited in Ursache et al., 2012) is an intervention that improves school readiness for low-income preschoolers. The intervention helps teachers and classroom assistants implement behavior management strategies and stress reduction techniques.



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- [Tools of the Mind](#) (Bodrova & Leong, 2007, as cited by Ursache et al., 2012) is an early childhood program that focuses on building self-regulation skills in young children by having them develop a Play Plan that describes the role and the actions the child will engage in during the first few minutes of play. The children can then update the plan once play begins.
- A self-regulated strategy development approach has been used to teach writing to children with ASD (Asaro-Saddler & Bak, 2013).
 - Using a peer component together with the mnemonics POW (Pick ideas, Organize notes, Write and say more) and TREE (Topic sentence, Reasons, Explain, strong Ending) proved effective in improving persuasive essays for children with ASD in the study.
- A small-group counseling intervention called [Student Success Skills \(SSS\)](#) was successful at promoting skills like connectedness and self-regulation, which are important to success in school and life (Lemberger & Clemens, 2012).
 - The standard program consists of five weekly classroom sessions with all students and eight small-group counseling sessions. All sessions are 45 minutes long. In this research, the sessions were conducted by counseling graduate students who participated in a one-day training. The program can also be conducted by counselors and teachers.
 - Elements of the SSS program include cognitive and metacognitive skills such as **goal setting**; self-management skills such as managing attention, **motivation**, anxiety, and anger; social skills such as **communication** and social **problem solving**; and attitudes.
- One model of self-regulated learning includes cognitive learning strategies, self-regulatory strategies to control cognition, and resource management strategies (Pintrich, 1999).
 - Cognitive learning strategies consist of memory or rehearsal tasks. “Rehearsal strategies involve the recitation of items to be learned or the saying of words aloud as one reads a piece of text. Highlighting or underlining text in a rather passive and unreflective manner also can be more like a rehearsal strategy than an elaborative strategy” (p. 460).
 - Self-regulation of cognition includes planning (setting goals), monitoring progress against goals, and regulating behavior to get back on track to meeting goals. An example of planning is “setting goals for studying, skimming a text before reading, generating questions before reading a text, and doing a task analysis of the problem” (p. 461). Monitoring can include “tracking of attention while reading a text or listening to a lecture, self-testing through the use of questions about the text material to check for understanding, monitoring comprehension of a lecture, and using test-taking strategies” (p. 461). Self-regulating behavior in reading could occur “when a student slows the pace of their reading when confronted with more difficult or less familiar text” (p. 461).
 - Resource management strategies help the student manage and control his or her environment. Specific strategies include managing and controlling time, managing and controlling effort, managing the study environment, and applying help-seeking strategies to peers and teachers (Pintrich, 1999).
- For children with ADHD, using interventions that feature if-then statements with **goal setting** followed by a support plan was shown to increase self-regulatory competencies (Guderjahn, Gold, Stadler, & Gawrilow, 2013). For example, “If I complete this assignment during my seminar



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class, then my grade in class will go up and I won't get grounded by my parents for having a missing assignment."

- Some other resources for strategies that can be applied in the classroom are:
 - A list of [Common Self-Regulation Strategies](#) (Greene & Reis, 2002).
 - [Tips and Strategies](#) for self-regulation and self-control in young children (University of New Mexico, 2007).
 - An explanation of [how a child's behavior can be linked to self-regulation problems](#), and how do deal with them (Do2Learn).
 - This [self-management plan](#) (Autism Speaks, 2012, p. 53):

My Self-Management Plan

	The behaviors I exhibit when I feel this way	What I need to do-
 I AM HIGH	<ul style="list-style-type: none"> ■ I grab others ■ I hit and bite ■ I yell loud ■ I cry loudly 	<ul style="list-style-type: none"> ■ Sit and breath- deep breaths ■ I need to be in a safe place ■ go to the beanbag and stay there! ■ Get to yellow
 I AM LOW	<ul style="list-style-type: none"> ■ I look tense, my shoulders and body are tense ■ I bite my tongue ■ I click my neck and fingers ■ I look red and sad ■ I need everything to be in its place 	<ul style="list-style-type: none"> ■ Take a sensory break ■ Ask for help ■ I need someone to write and explain what's going on! ■ I need to take DEEP breaths
 I AM CALM	<ul style="list-style-type: none"> ■ I can sit and focus ■ I can follow my schedule ■ I can answer with my voice ■ I do respond to others and I look relaxed! 	<ul style="list-style-type: none"> ■ I can earn my points and get preferred breaks

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Self-Regulation Questionnaire

Please **CHECK ONE** response that best describes you. Be honest, since the information will be used to help you in school and also help you become more prepared for college and careers. There are no right or wrong answers!

Student ID _____

Date _____

	Not very like me → Very like me				
	1	2	3	4	5
1. I plan out projects that I want to complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. If an important test is coming up, I create a study plan.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Before I do something fun, I consider all the things that I need to get done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I can usually estimate how much time my homework will take to complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I have trouble making plans to help me reach my goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I keep track of how my projects are going.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I know when I'm behind on a project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I track my progress for reaching my goal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I know what my grades are at any given time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Daily, I identify things I need to get done and track what gets done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I have trouble remembering all the things I need to accomplish.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I do what it takes to get my homework done on time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I make choices to help me succeed, even when they aren't the most fun right now.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. As soon as I see things aren't going right, I want to do something about it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I keep trying as many different possibilities as necessary to succeed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I have difficulty maintaining my focus on projects that take a long time to complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. When I get behind on my work, I often give up.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I think about how well I'm doing on my assignments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I feel a sense of accomplishment when I get everything done on time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I think about how well I've done in the past when I set new goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. When I fail at something, I try to learn from my mistakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I keep making the same mistakes over and over again.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

College and Career Competency Instructional Plan

Directions: Use this form as a way to organize how you will teach a competency across time within your course content. You will describe an ongoing set of instructional activities - not just a one-time lesson. Students will need instruction, feedback, and support to learn a competency and apply the essential components with the objective of shifting the responsibility from you to the students. Resources are available at www.researchcollaboration.org/page/CCCFramework to help you teach the competency (i.e., teacher’s guide, student questionnaire, video, poster, and padlet).

Name: _____

School: _____

Setting <i>e.g., Biology 1, counseling, advisory</i>	
Learners <i>e.g., grade level(s)</i>	
Competency Name & Essential Components www.researchcollaboration.org/page/CCCFramework	
Results <i>Why do you want students to get better at this competency? What do you want to improve through your instruction on this competency? Be specific (e.g., assignments submitted on time, better understanding of content, increased engagement in class discussions, students’ increased confidence in content).</i>	
Initial Instruction (I do) <i>How will you teach the essential components of the competency (e.g., model by giving examples, brainstorm strategies around components)? How will students understand their strengths and areas for growth related to competency components (e.g., give competency questionnaire and facilitate student reflection)?</i>	
Practice with Feedback (We do and You do) <i>How will students practice the competency components over time during your class? How will you provide feedback on students’ demonstration of competency components?</i>	
Reinforcement <i>Outside of instruction, how will you recognize and reinforce students’ demonstration of the components?</i>	
Materials and Resources <i>What materials and resources will you access or create to develop this competency?</i>	
Plan Addresses: <input type="checkbox"/> All components <input type="checkbox"/> Ongoing instruction <input type="checkbox"/> Feedback to students <input type="checkbox"/> Opportunities to demonstrate	

CCC “In Your Class” Activity

Directions: Describe how you could provide instruction for an interpersonal or intrapersonal competency to one or more students within a specific content area or task (e.g., math class or reading a novel). Imagine ways that you could teach students through instruction, guided practice, and independent practice, addressing the components.

Name:

School:

Content Area or Setting:

Competency and Essential Components:

Initial Instruction: How will you explain or illustrate the competency definition, its overall importance, and the essential components related to the students’ context? Describe set of activities/materials.

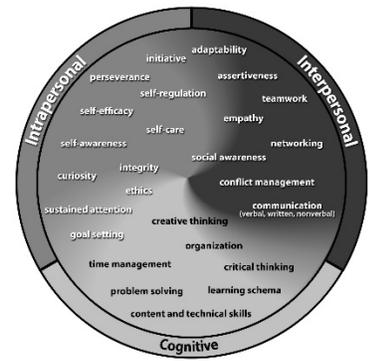
Guided Practice: How will you provide opportunities for students to practice and demonstrate the competency? How will you support and provide feedback to students as they practice and reflect? Describe set of activities/materials.

Independent Practice: How will you reinforce the competency and support students as they individually work on the competency? Describe set of activities/materials.

Target College and Career Competency (CCC) _____

Essential Components:

- _____
- _____
- _____



Ideas to provide initial instruction & guided practice on essential components:

- ___ I have explained **why** the CCC is important to what we are learning and to college and careers, and **how** to be better at it.
- ___ **Students** have practiced the CCC essential components over time.
- ___ I provided feedback to students on their performance/skill/demonstration of each essential component.

Target College and Career Competency (CCC) _____

Essential Components:

- _____
- _____
- _____



Ideas to provide initial instruction & guided practice on essential components:

- ___ I have explained **why** the CCC is important to what we are learning and to college and careers, and **how** to be better at it.
- ___ **Students** have practiced the CCC essential components over time.
- ___ I provided feedback to students on their performance/skill/demonstration of each essential component.

Newsletter: October, 2016

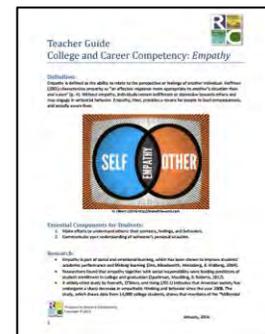
Welcome to the first College and Career Competency Framework newsletter from Research Collaboration at the University of Kansas! The purpose of this communication is to keep school teams who have participated in College and Career Competency (CCC) Framework projects and those who are interested in the CCC Framework informed of current resources and best practices.

The CCC Framework focuses on developing intrapersonal and interpersonal college and career competencies (CCCs) for all students through:

- Collaboration between all stakeholders (e.g., administrators, general and special educators, counselors, service providers, families, etc.),
- Multi-tiered instruction and intervention, focusing specifically at the Tier 1, school-wide level, and
- Effective use of data to inform instruction.

Instructional Ideas for Intra- and Interpersonal Competencies

UPDATED competency resources are [HERE!](#) Based on the most current research, we've updated the College and Career Competency Wheel, as well as competency-specific teacher guides, videos, instructional idea Padlets, and student-friendly posters.

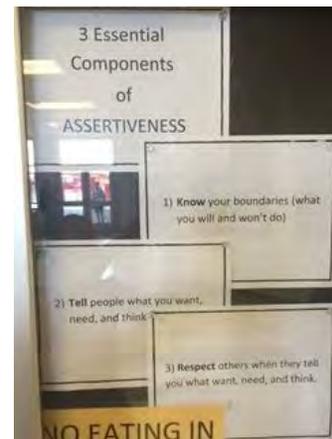


College and Career Competencies "In the News"

A recent article from Education Week (June 30, 2015) titled [Survey Suggests Social and Emotional Learning Has Staked a Claim in Schools](#) states that social and emotional learning (i.e., intra- and interpersonal competencies) continues to be valued by school professionals, even amid traditional curriculum pressures. The article also emphasizes that instruction on social and emotional learning is necessary school-wide rather than being reserved for one-time lessons or specific programs targeting only certain students. This is a great article to encourage others in your school to be involved in this work, emphasizing a systematic and SCHOOL-WIDE approach!

School Spotlight

Shout out to **Florence Unified School District in Florence, Arizona**! This team was part of the 14-16 College and Career Competency Team Training cohort. In their year-end summary of the College and Career Competency Framework professional development process, they described how they worked on the interpersonal competency of assertiveness. They created a campaign to discuss assertive, passive, and aggressive behaviors at both of their high school sites, complete with weekly video bulletins. An example of one of their videos from Florence High School is found here: <https://www.youtube.com/watch?v=SXXFeNLaNjk>. The video bulletins are current, relatable, and performed by students at different high schools within the district, adding to the authenticity of the message. The Assertiveness Campaign proved to be very interesting across Tier 1. Students were actively engaged in talking about whether they were assertive, passive, or aggressive in classes and as part of the overall school culture. Assertiveness visuals were also displayed throughout the schools (see examples below). Upon completion of their Assertiveness Campaign students were provided an opportunity to complete an assessment on "The Importance of Assertiveness." The results of the survey indicated that approximately 75% of their students understood the assertiveness content and answered appropriately. Going forward, Florence plans to create a four-year plan that will develop more interpersonal competencies like assertiveness each year, from Freshmen to Seniors. In this way they can expand from where they began. Way to go, Florence! Research to Practice!



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